JAN 1 3 2000

GRIFFIN INTERNATIONAL INC

January 11, 2000

Mr. Chuck Schwer
Sites Management Section
VTDEC WMD
103 South Main St./ West Bldg.
Waterbury, VT 05671-0404

RE: Investigation of Subsurface Petroleum Contamination at Rod's Mobil, Putney, Vermont (VTDEC Site # 97-2309)

Dear Mr. Schwer:

Enclosed please find a copy of the report on the initial site investigation conducted continued at the above referenced site. Mr. Rodney Winchester requested that a copy be forwarded to you for your review.

Select petroleum constituents were detected at concentrations exceeding Vermont Groundwater Enforcement Standards in groundwater samples collected as part of this site investigation. Based on these results, Griffin is recommending that a confirmatory round of groundwater monitoring be conducted in April 2000.

Please do not hesitate to call, if you have any questions or comments.

Sincerely,

Beth Stopford

Beth Stopford
Environmental Engineer

Enc.

cc: Mr. Rodney Winchester, Rod's Mobil
GI #29941479

P.O. Box 943 • Williston, VT 05495 • Phone 802-865-4288 • Fax 802-657-4129
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INITIAL INVESTIGATION OF SUBSURFACE PETROLEUM CONTAMINATION AT ROD'S MOBIL AND ANNUAL SOIL STOCKPILE MONITORING EVENT

December 21, 1999

Site Location:

Rod's Mobil
46 Main Street
Putney, VT

VTDEC SITE #97-2309
GI Project #29941479

Prepared For:

Mr. Rodney Winchester
Rod's Mobil
46 Main Street
Putney, VT 05346

Prepared By:

P.O. Box 943 / 20 Commerce Street Williston, VT 05495 (802) 865-4288

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APPENDICES

I. INTRODUCTION

This report summarizes the initial investigation of suspected subsurface petroleum contamination at Rod's Mobil, located at 46 Main Street/Route 5 in Putney, VT (see location map in Appendix A). This investigation was conducted by Griffin International, Inc. (Griffin) for Mr. Rodney Winchester of Rod's Mobil to address petroleum contamination detected during an underground storage tank (UST) closure inspection in November 1997. The Vermont Department of Environmental Conservation (VTDEC) requested that this work be completed in a letter to Mr. Winchester, from Mr. Chuck Schwer of the VTDEC, dated April 21, 1998. The site, (VTDEC Site #97-2309), is owned by Mr. Winchester.

Work conducted at the site included the installation of four groundwater monitoring wells, the collection and laboratory analysis of groundwater samples from these monitoring wells, the collection and analysis of a sample from the Rod's Mobil supply well and a nearby supply well, and an annual soil stockpile monitoring event. In addition, a sensitive receptor risk assessment was conducted to assess the risk that subsurface petroleum contamination at the site may pose to potentially sensitive receptors identified in the site vicinity. Work has been conducted generally in accordance with Griffin's *Work Plan and Cost Estimate for Subsurface Investigation and Soil Stockpile Monitoring at Rod's Mobil* dated February 15, 1999. The Work Plan was approved by Mr. Rodney Winchester, in a telephone conversation with Griffin on March 10, 1999, and by Mr. Robert Butler of the VTDEC in a letter dated February 16, 1999.

II. SITE BACKGROUND

A. Site History

Subsurface petroleum contamination was detected in soil at Rod's Mobil during the closure of (3) 4,000-gallon gasoline and (1) 500-gallon No. 2 fuel oil underground storage tanks (USTs) at the site. These tanks were replaced with (1) 6,000-gallon gasoline and (1) 10,000-gallon gasoline USTs. Tank closure activities were conducted on November 11 and November 17, 1997. Details of the closure inspection are outlined in the Underground Storage Tank Permanent Closure Form [1]. Adsorbed petroleum contamination was detected in the vicinity of the former USTs, as measured with a photoionization detector (PID). Concentrations of volatile organic compounds (VOCs) measured with the PID in the vicinity of the former gasoline UST system and the pump islands exceeded Soil Guideline Thresholds set by the Waste Management Division of the VTDEC [2]. VOC concentrations in the vicinity of the No. 2 fuel oil UST also exceeded Soil Guideline Thresholds.

Approximately 200 cubic yards of petroleum contaminated soil resulting from the UST closure and replacement activities in November 1997 were stockpiled and polyencapsulated off-site at the Winchester property on Abbott Road in West Brattleboro, Vermont. Permission for off-site soil stockpiling was given by Ms. Sue Thayer of the VTDEC on November 17, 1997.

In compliance with a request from the VTDEC that additional work be conducted at this site in order to determine the degree and extent of petroleum contamination, Mr. Winchester retained the services of Griffin to conduct this initial site investigation.

B. Site Description

Rod's Mobil is located on the east side of Route 5 in Putney, VT (see Site Location Map in Appendix A). The area surrounding the site is occupied by commercial and residential properties, and unimproved land.

The area, including Rod's Mobil, is serviced by private water supply wells. Rod's Mobil is serviced by a supply well, which is shared with Curtis Bar-B-Que. The supply well is located to the southeast of Rod's Mobil, on property owned by Curtis Bar-B-Que. Rod's Mobil is serviced with an on-site septic system, located on the north side of the garage. Floor drains were utilized in the garage until approximately ten years ago, when they were permanently closed. Prior to the closure of the floor drains, liquid flowing into the drains was treated by an oil-water separator, and the treated water was discharged to the septic system [3].

The on-site garage is constructed on a cement slab foundation. The majority of the property surrounding the building is paved. Some landscaped areas and lawn exist at the perimeter of the property and on an island between the parking area and Route 5 (see Site Map).

C. Site Geologic Setting

According to the Surficial Geologic Map of Vermont [4], the site is underlain by littoral sediment, primarily well-sorted sand with no pebbles or boulders. Actual subsurface materials consist of well-graded sand and silt. Bedrock at the site is mapped as a member of the Littleton Formation, consisting of gray slate and phyllite with interbeds of schistose quartzite [5].

Based on visual observation and review of the USGS topographic map [6], groundwater in the vicinity of Rod's Mobil site would be expected to flow to the southeast toward the Connecticut River, following topographic contours.

III. INVESTIGATIVE PROCEDURES

A. Monitoring Well Installation

On September 28, 1999, four groundwater monitoring wells were installed by T&K Drilling of East Swanzey, New Hampshire using a hollow stem auger drilling rig. Drilling and well

construction were directly supervised by a Griffin engineer. Soil samples were collected at five-foot intervals from each boring. Each soil sample was screened for volatile organic compounds (VOCs) using an HNu™ Model HW-101 PID equipped with a 10.2 eV bulb. Soils were screened using the Griffin Jar/Polyethylene Bag Headspace Screening Protocol, which conforms to state and industry standards. Contaminant concentrations and soil characteristics were recorded in detailed boring logs by the supervising Griffin engineer (see the Boring Logs in Appendix B).

The monitoring wells (MW1, MW2, MW3 and MW4) were installed to help better define groundwater flow direction and gradient, and the degree and extent of suspected petroleum contamination at the site. MW-1 was installed southwest of the presumed source area (e.g. the former gasoline and No. 2 fuel oil UST systems) in a presumed downgradient direction. MW-2 was installed north of the presumed source area, in an estimated upgradient direction. MW-3 and MW-4 were installed to the east and west of the former UST system, respectively, in a presumed crossgradient direction.

The monitoring wells were constructed of 2-inch diameter Schedule 40 PVC riser and 0.010-inch factory slotted, well screen. The length of the riser and the screened section of pipe varied depending on the depth of the well. The annulus between the well screen and the borehole was filled with a sand pack to just above the well screen. A bentonite seal was placed above the sand pack. The remainder of the boring was filled with native backfill. To complete the construction of each well, a road box was set in concrete at grade level. In addition, locking well caps were placed on the monitoring wells. Specific well construction details are displayed in the detailed well construction diagrams included in Appendix C.

MW1

The boring for MW1 was advanced to 22 feet below grade. Soils from the boring for MW1 consisted of brown, well graded sand with silt from 0 to 2 feet below grade. Light brown, well graded sand was observed from 5 to 7 and 10 to 10.5 feet below grade. Moist to wet, light brown and olive gray silt with sand was observed from 10.5 to 12 feet below grade. Wet silt was observed from 15 to 17 and from 20 to 22 feet below grade. No elevated VOC concentrations were detected in soil samples collected for PID screening.

Groundwater was encountered at approximately 15 feet below grade. The screened section of the well was installed to 20 feet below the ground surface.

MW2

The boring for MW2 was advanced to 27 feet below grade. Soils from the boring consisted of dry, well graded, sand with silt from 0 to 2 feet below grade. Dry, well graded sand was observed between 5 and 7 feet. Soils between 10 and 12 feet below grade consisted of moist, well graded sand with silt. Wet silt was observed from 15 to 17 and from 20 to 22 feet below

grade. Soils between 25 to 27 feet below grade consisted of wet silt with sand, in layers. No elevated VOC concentrations were detected using the PID.

Groundwater was encountered at 15 feet below grade. The screened section of the well was installed to 25 feet below grade.

MW3

The boring for MW3 was advanced to 22 feet below grade. Soils from the boring consisted of dry well graded sand with silt from 0 to 2 feet below grade. Dry, well graded sand was observed from 5 to 7 feet. Dry, poorly graded sand was observed between 10 and 12 feet. Soils from 15 to 17 and 20 to 22 feet below grade consisted of wet, sandy silt. No elevated VOC concentrations were detected using the PID in the boring for MW3.

Groundwater was encountered at 15 feet below grade. The screened section of the well was installed to 20 feet below grade.

MW4

The boring for MW4 was advanced to 22 feet below grade. Soils from the boring consisted of dry well graded sand with silt from 0 to 2 feet below grade. Dry to moist, well graded sand was observed from 5 to 7 feet. Moist, silty sand was observed between 10 and 12 feet. Soils from 15 to 17 feet below grade consisted of wet, silt with sand. Wet silt was observed from 20 to 22 feet below grade. No elevated VOC concentrations were detected using the PID in the boring for MW4.

Groundwater was encountered at 15 feet below grade. The screened section of the well was installed to 20 feet below grade.

B. Determination of Groundwater Flow Direction and Gradient

Water table elevation measurements were collected from the four monitoring wells on October 12, 1999 using a Keck™ interface probe. These measurements were subtracted from the top of casing elevations, which were determined relative to an arbitrary datum of 100 feet at the top of the casing for MW3, to determine the water table elevation at each of the wells. Groundwater level data are recorded in Appendix C. No free phase petroleum product was observed in any of the monitoring wells gauged on October 12, 1999.

As displayed in the groundwater contour map included in Appendix A, the groundwater flow direction on October 12, 1999 appears to flow to the south-southwest at a hydraulic gradient of approximately 1.4%. Under the groundwater flow regime described, MW2 is located upgradient of the presumed source area. MW3 and MW4 are located crossgradient of the former UST

system, and MW1 is downgradient of the former gasoline UST system, and down to crossgradient of the former No. 2 fuel oil UST.

C. Groundwater Sample Collection and Analysis

Groundwater samples were collected from each monitoring well immediately following well gauging on October 12, 1999. Samples were analyzed for the presence of VOCs per EPA Method 8021B, and for Total Petroleum Hydrocarbons (TPH) via EPA Method 8015 DRO. Results of the laboratory analyses are summarized in Appendix E. Laboratory report forms are presented in Appendix F.

Concentrations of 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and napthalene were detected in the downgradient monitoring well, MW1, at concentrations exceeding their respective VGES. Low concentrations of TPH were also detected in MW1, and may indicate that a component of the contaminant plume is related to the former No. 2 fuel oil UST.

Benzene and MTBE were detected in the upgradient monitoring well, MW2, at concentrations exceeding their respective VGES. MW2 is located in the vicinity of the pump island, and may be attributed to lateral dispersion of dissolved contamination from the vicinity of the pump island.

MTBE was detected in MW3, located cross-gradient of the former gasoline UST system, at a concentration below the VGES.

None of the compounds targeted by these analyses were detected in MW4.

All samples were collected according to Griffin's groundwater sampling protocol, which complies with industry and state standards. Results from the analyses of the trip blank and duplicate samples indicate that adequate quality assurance and control (QA/QC) were maintained during sample collection and analysis.

D. Soil Stockpile Monitoring

Approximately 200 cubic yards of petroleum contaminated soils generated during the November 1997 UST removal and replacement activities are stockpiled and polyencapsulated offsite at the Rodney Winchester property on Abbott Road in West Brattleboro, Vermont. The annual screening of these stockpiled soils was conducted on October 12, 1999. Eight soil samples were collected from depths of 1 to 3 feet in the soil pile using a hand auger. Negligible VOC concentrations, (0.1 to 0.3 ppm) were detected in these soils as measured with a PID.

The management of the stockpiled soils, in accordance with VTDEC guidelines, will be conducted by representatives of Rod's Mobil.

E. Supply Well Sample Collection and Analysis

Rod's Mobil is serviced by a drilled supply well, located more than 250 feet southeast, and crossgradient, of the former UST system, on a neighboring property owned by Mr. Curtis Tuss, of Curtis Bar-B-Que. The well is shared by Rod's Mobil and Curtis Bar-B-Que.

A sample was collected from the Rod's Mobil supply well on October 12, 1999. The sample was collected from a sink inside the Rod's Mobil facility for analysis via EPA Method 524.2. None of the compounds targeted by this analysis were detected in the sample collected from the Rod's Mobil supply well on October 12, 1999. Laboratory report forms are presented in Appendix F.

F. Sensitive Receptor Risk Assessment

A receptor risk assessment was conducted to identify known and potential receptors of contamination detected at the Rod's Mobil site. A visual survey was conducted during monitoring well installation. Based on these observations, a determination of the potential risk to identified receptors was made based on proximity to the expected source area (i.e., the former gasoline/diesel/fuel oil UST system), groundwater flow direction, and contaminant concentration levels in groundwater.

Water Supplies

Rod's Mobil and the surrounding businesses and residences are served by private drinking water supply wells. The nearest supply well is west of the site, on property occupied by the Putney Food Co-op. According to the VTDEC Well Completion Report [7], this well is a drilled bedrock well, and is approximately 500 feet below ground surface.

A sample was collected from the Putney Co-op supply well on October 12, 1999, from a sink in the co-op kitchen. The sample was submitted for analysis by EPA Method 521.2. None of the compounds targeted by this analysis were detected in the samples collected on October 12, 1999 from the Putney Co-op supply well or the Rod's Mobil supply well.

No other supply wells were observed in the direct vicinity of the Rod's Mobil site.

which is it?

Buildings in the Vicinity

Environmental risk to the on-site building is considered minimal, given that the building does not have a basement, which would allow the potential accumulation of petroleum vapors, and that it is serviced by a municipal water supply. Additionally, the depth to groundwater is approximately 15 feet below grade, which minimizes potential risks to the buildings via petroleum vapor migration. The majority of the Rod's Mobil site, and specifically the source area, is paved, reducing the potential for exposure to the petroleum compounds through dermal contact with soils or inhalation of vapors.

The Curtis Bar-B-Que, located adjacent to the Rod's Mobil facility, is located in a crossgradient position from the source area. The buildings on the Curtis Bar-B-Que property do not have basements, and are therefore considered at minimal risk of impact via petroleum vapors. Other buildings in the area are considered at minimal risk from the on-site gasoline contamination due to their distance from the source area, and location in upgradient and crossgradient positions.

Surface Water

The nearest surface waters are an unnamed stream located approximately 300 feet east of the source area at Rod's Mobil; and the Connecticut River, located approximately 2500 feet south of the subject site. The unnamed stream is crossgradient of the source area, based upon the October 12, 1999 water table elevations, and is considered at minimal risk of petroleum impact from the Rod's Mobil site. The Connecticut River is downgradient of the source area. Given the substantial distance of the river from the subject site, the Connecticut River is considered at minimal risk of petroleum impact.

Utility Corridors

The area surrounding Rod's Mobil is serviced by private supply wells and septic systems. Adsorbed petroleum contamination was not detected in soils at the Rod's Mobil site during drilling on September 28, 1999. The depth to groundwater beneath the site is 15 feet below ground level, greater than the average depth of utility corridors (3 to 6 feet). Therefore the potential of contaminant migration via utility corridors is considered minimal, if utility corridors do exist in the area.

IV. CONCLUSIONS

Based on this additional site investigation of petroleum contamination at the Rod's Mobil site, the following conclusions are offered:

1. There has been an apparent release(s) of gasoline and No. 2 fuel oil in the subsurface at the subject site. The nature and duration of these releases is not known.

2. VOC readings of soils collected during the UST removal in November, 1997 indicate that adsorbed petroleum compounds exist in the soils in the immediate vicinity of the former gasoline and No. 2 fuel oil UST systems. Approximately 200 cubic yards of petroleum contaminated soils was removed from the site for off-site treatment. The remaining petroleum contaminated soils at the Rod's Mobil site are paved over, and are not readily accessible, reducing risk to potential receptors. With the source USTs closed, it is expected that adsorbed petroleum compound concentrations will decrease over time with the progressive action of natural mitigative processes including biodegradation, volatilization, and diffusion.

3. Four groundwater monitoring wells were installed at the Rod's Mobil site on September 28, 1999 to evaluate the degree and extent of subsurface petroleum contamination detected during the closure inspection of gasoline and No. 2 fuel oil USTs in November 1997. No elevated VOC concentrations were detected in soil samples collected during monitoring well installation.

4. Water table elevation data collected on October 12, 1999 indicate that groundwater in the overburden aquifer beneath the site is flowing generally to the south southwest at a hydraulic gradient of approximately 1.4%.

5. No free product was present in the monitoring wells sampled on October 12, 1999.

6. The groundwater samples collected from the downgradient monitoring well, MW1, had concentrations of naphthalene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene exceeding their respective VGESs.

7. Benzene and MTBE were detected in the upgradient monitoring well, MW1, at concentrations exceeding their respective VGES.

8. The downgradient and upgradient extents of the contaminant plume have not been defined. The plume appears to be migrating to the south-southwest.

9. Approximately 200 cubic yards of petroleum contaminated soils are stockpiled off-site. VOC measurements made during the stockpile screening on October 12, 1999 ranged from 0.1 to 0.3 ppm.

10. Petroleum compounds were not detected in samples collected for laboratory analysis from the Rod's Mobil supply well and the Putney Co-op supply well on October 12, 1999.

11. Receptors in the vicinity of the site which have been identified as being at potential risk of impact from subsurface petroleum contamination is the Connecticut River, located downgradient of the source area at Rod's Mobil. Risk to the river is considered minimal at this time, given its distance from the contaminant source.

12. With the apparent source removed (i.e., the former gasoline and No. 2 fuel oil USTs), it is expected that, over time, the natural processes of dilution, dispersion, and biodegradation will reduce dissolved contaminant concentrations present in groundwater beneath the Rod's Mobil site.

V. RECOMMENDATIONS

Based upon the above conclusions, Griffin presents the following recommendations:

1. Because there are no identified at-risk downgradient receptors, the current well array is considered sufficient to track the expected degradation of petroleum contamination in groundwater beneath the Rod's Mobil site.

2. Because contaminant levels at the site were detected at concentrations greater than the VGES for several compounds, a confirmatory round of groundwater sampling should be conducted at this site. The confirmatory sampling event should be scheduled for April, 2000.

3. A confirmatory screening of the off-site soil stockpile should be conducted in October 2000. If PID readings remain below 1 ppm, and there is no visual or olfactory evidence of petroleum contamination, confirmation soil samples should be collected for laboratory analysis.

VI. REFERENCES

[1] Griffin International Inc., November 19, 1997. UST Closure Letter Report from Laurie T. Reed to Susan Thayer (VTDEC) re: UST Closure Inspection at Rod's Mobil, UST Facility 420. UST Permanent Closure Form

[2] Winchester, Rodney, property owner. December 20, 1999, telephone interview.

[3] Vermont Department of Environmental Conservation. *Agency Guidelines for Contaminated Soils and Debris,* August, 1996.

[4] Doll, Charles G., ed., 1970, *Surficial Geologic Map of Vermont,* State of Vermont.

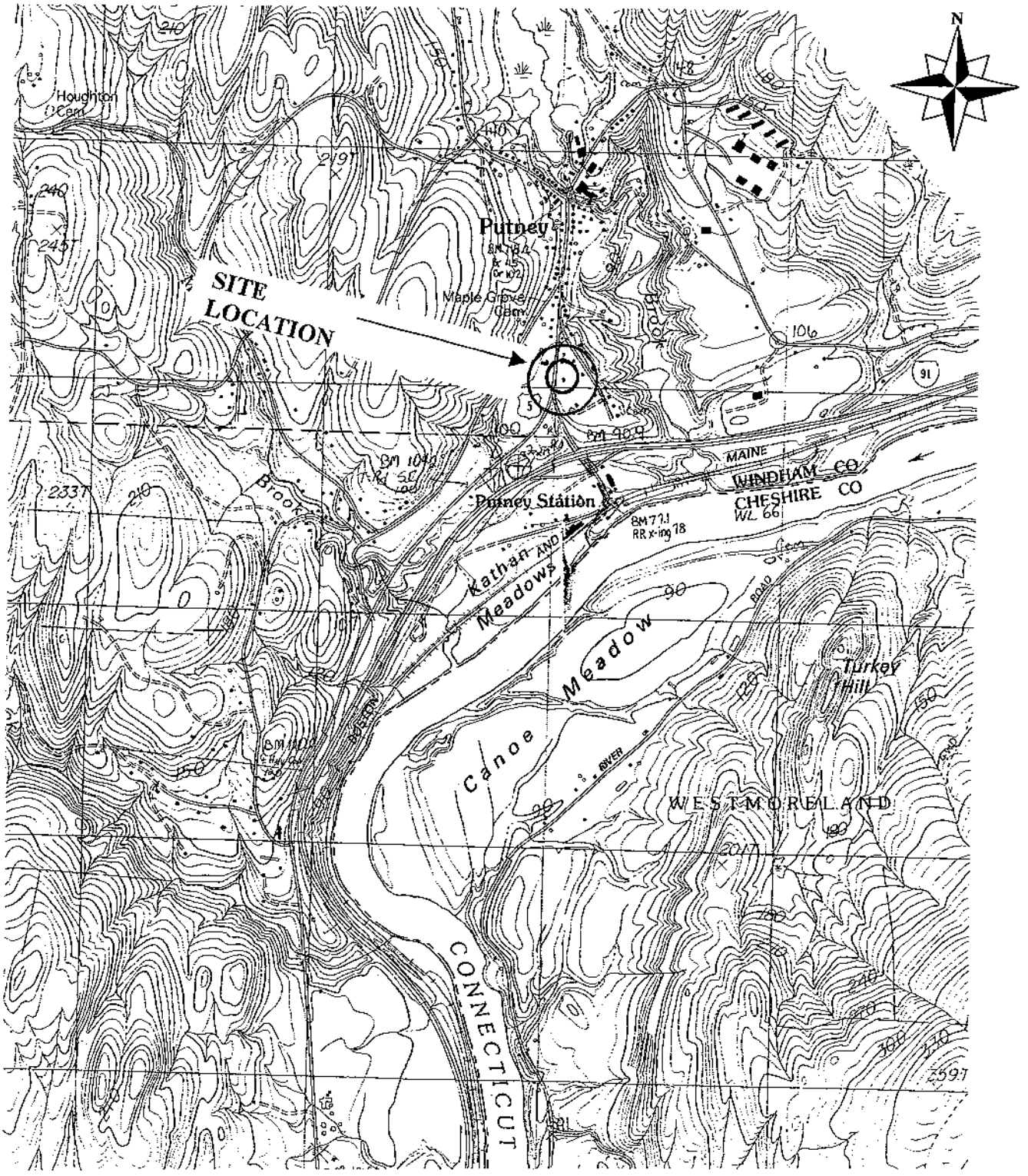
[5] Doll, Charles G., ed., 1961, *Centennial Geologic Map of Vermont*, State of Vermont.

[6] USGS 7.5 Minute Topographic Quadrangle Map. 1984. Newfane, VT-NH.

[7] Vermont Department of Environmental Conservation. Well Completion Report, Putney Cooperative, Well No. 7413. March 13, 1992.

APPENDIX A

Maps



Job #: 29941479

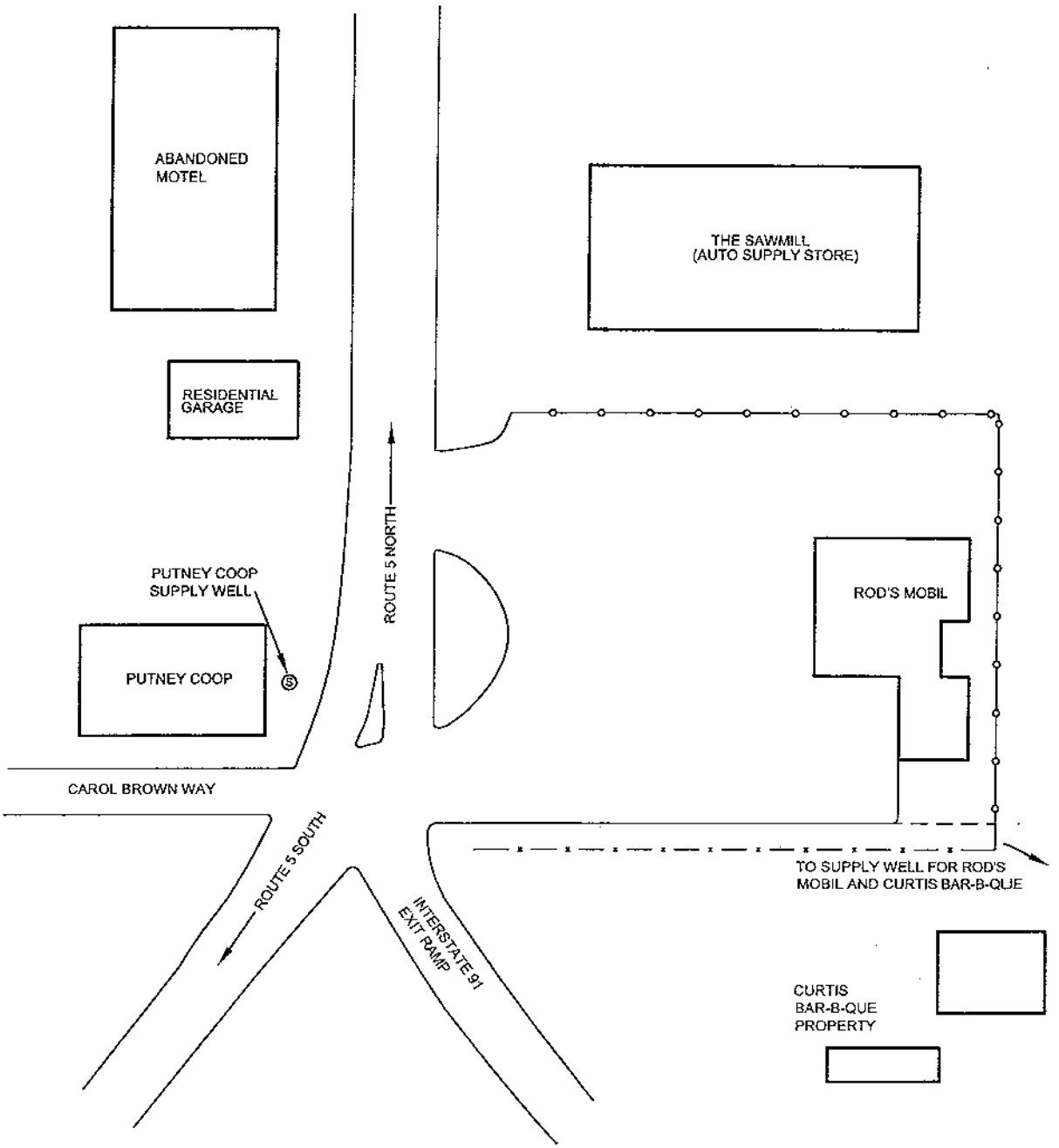
GRIFFIN INTERNATIONAL

Rod's Mobil

46 Main Street, Putney, VT

Site Location Map

Date:	Source:	Scale:
12/3/99	USGS 7.5-minute topographic map. Newfane, VT - NH quadrangle. 1984	1"=2000'



SOURCE: GRIFFIN INTERNATIONAL SURVEY DATA, 9/28/99

JOB #: 29941479 VTDEC SITE # 97-2309

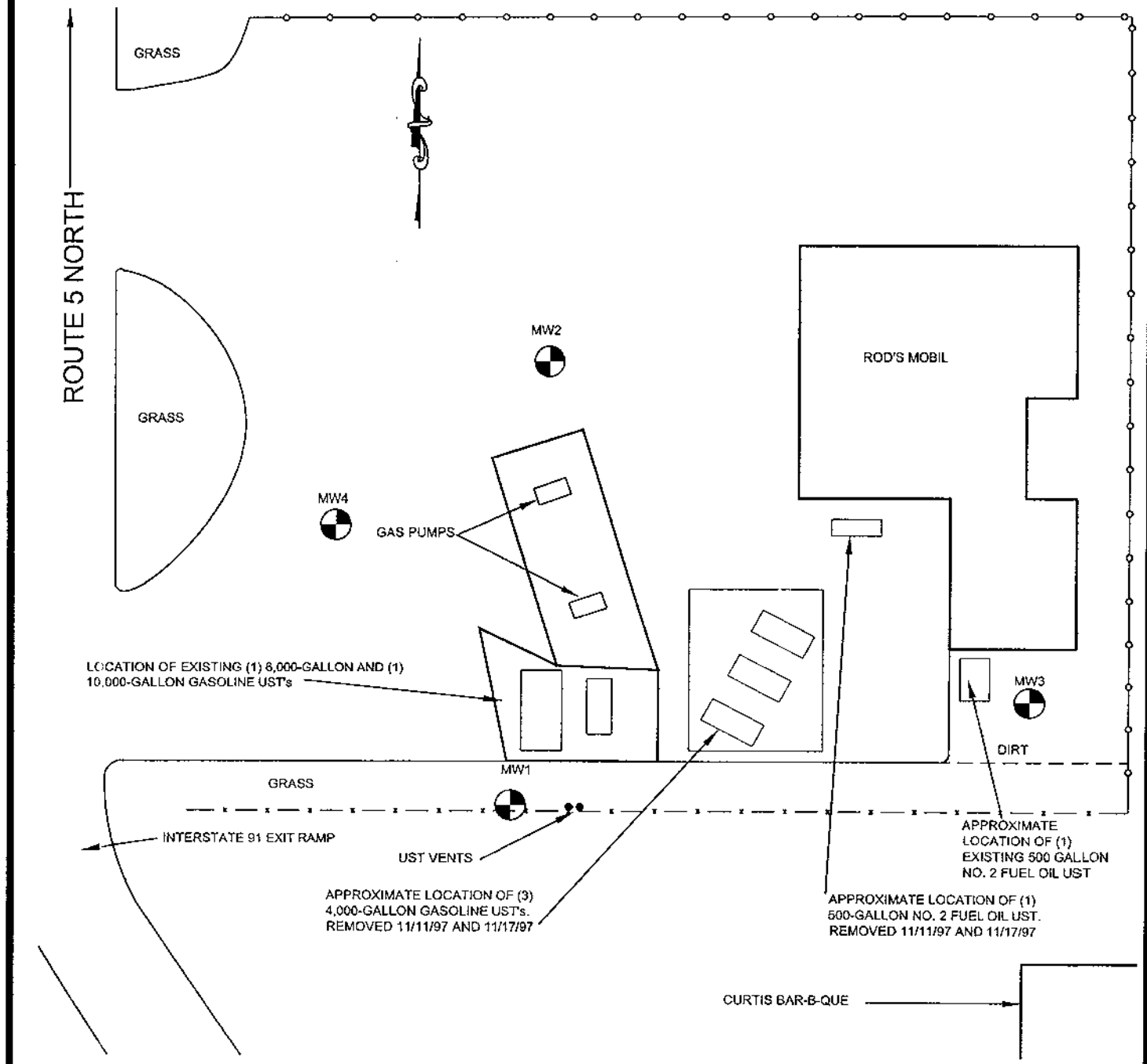
GRIFFIN INTERNATIONAL INC

ROD'S MOBIL

46 MAIN STREET, PUTNEY, VERMONT

AREA MAP

DATE: 10/16/99	DWG.#: 2	SCALE:1"= 60'	DRN.:MP	APP.:BS



SOURCE: GRIFFIN INTERNATIONAL SURVEY DATA, 9/28/99

JOB #: 29941479 VTDEC SITE # 97-2309

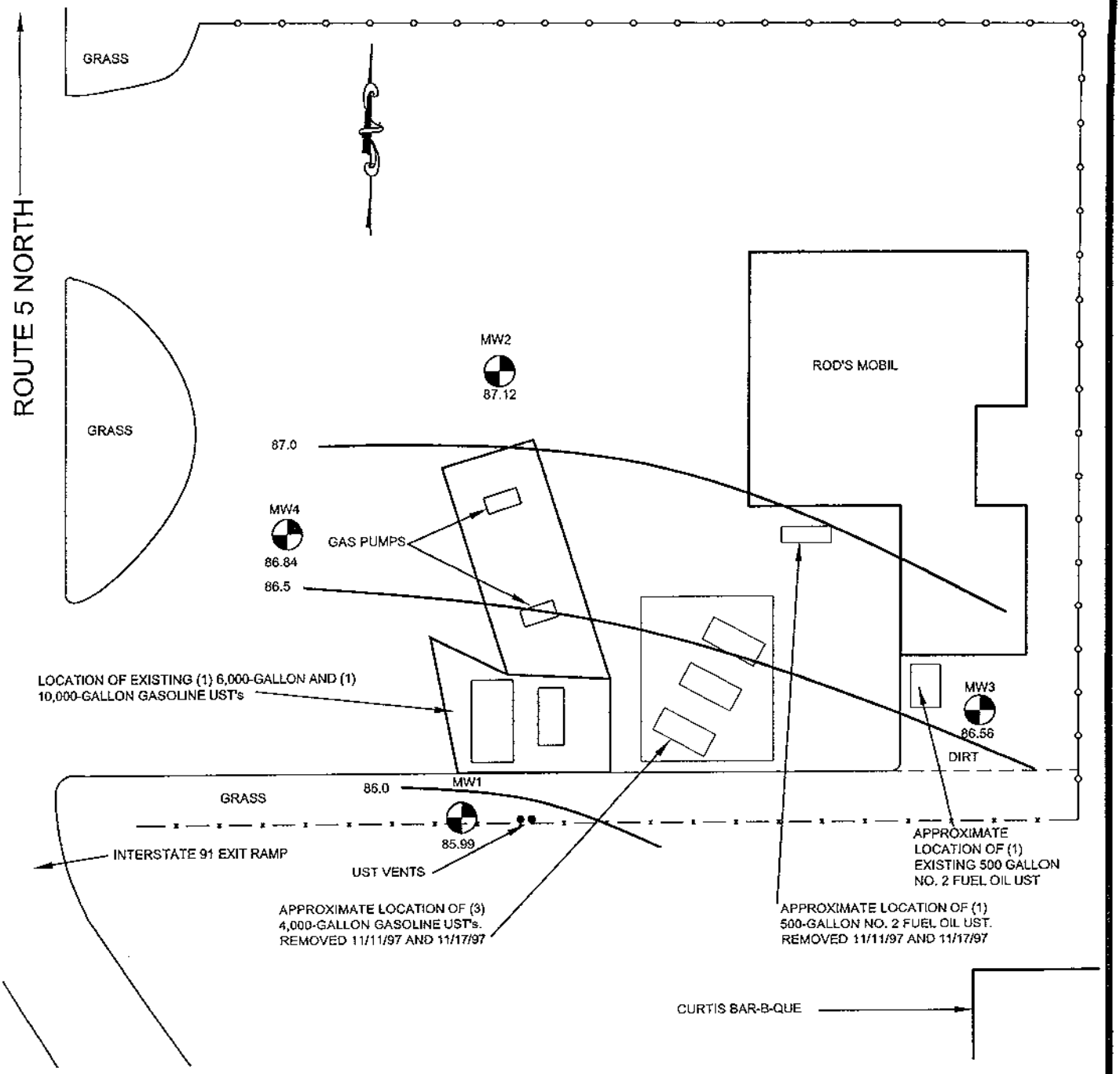
GRIFFIN INTERNATIONAL INC

ROD'S MOBIL

46 MAIN STREET, PUTNEY, VERMONT

SITE MAP

DATE: 10/15/99	DWG.#: 1	SCALE:1"= 30'	DRN.:MP	APP.:BS



LEGEND

- MW2 87.12 — MONITORING WELL WITH GROUNDWATER LEVEL ELEVATION, IN FEET
- — x — FENCE, PICKET
- — o — FENCE, STOCKADE
- 86 — GROUNDWATER TABLE CONTOUR

SOURCE: GRIFFIN INTERNATIONAL SURVEY DATA, 9/28/99

JOB #: 29941479 VTDEC SITE # 97-2309

GRIFFIN INTERNATIONAL INC

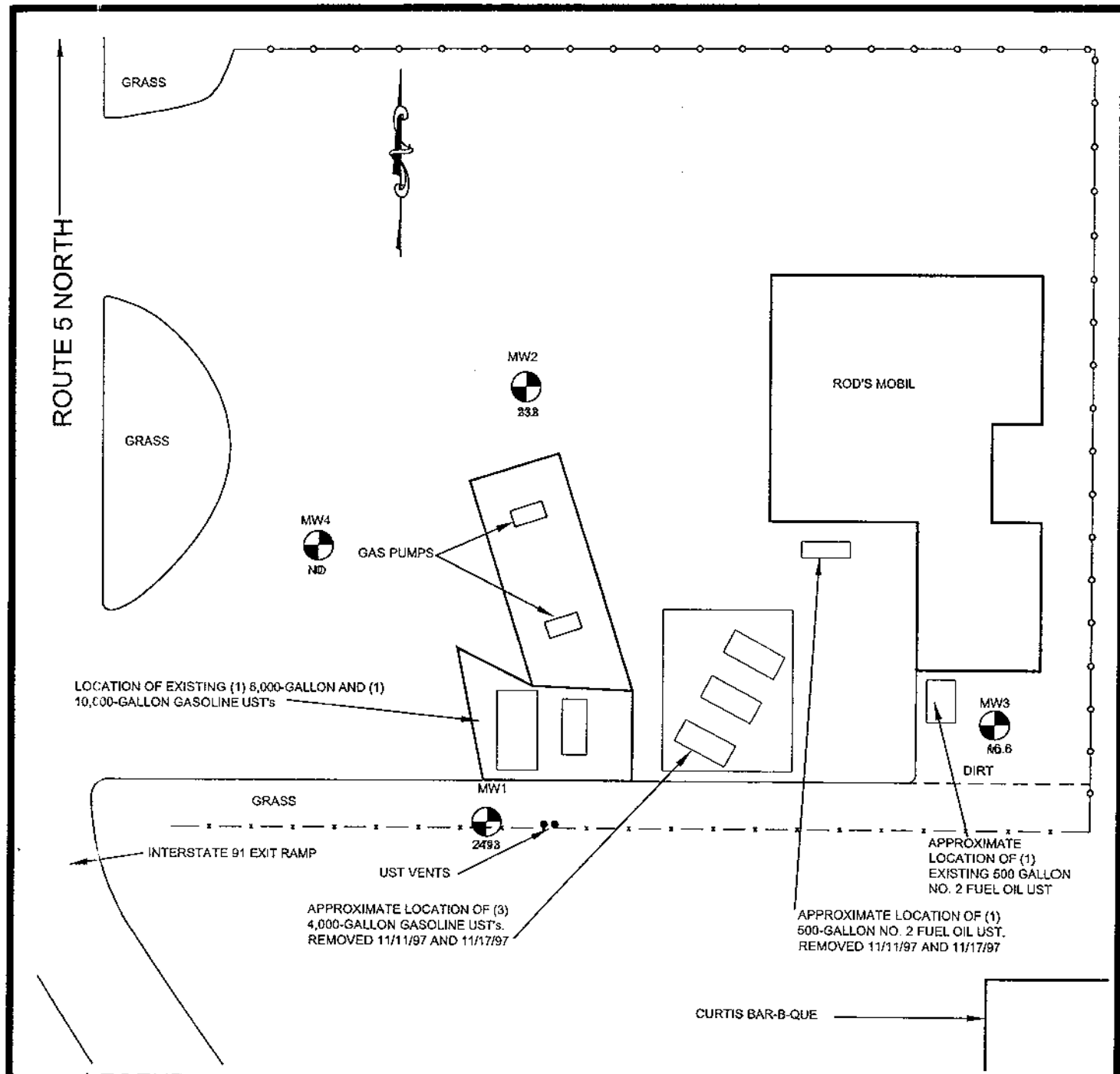
ROD'S MOBIL

46 MAIN STREET, PUTNEY, VERMONT

GROUNDWATER CONTOUR MAP

MEASURED 9/30/99

DATE: 10/15/99	DWG.#: 3	SCALE:1"= 30'	DRN.: MP	APP.: BS



LEGEND

- MW1 238 — MONITORING WELL WITH TOTAL TARGETED VOC CONCENTRATION (ppb), METHOD 8021B
- — x — FENCE, PICKET
- — o — FENCE, STOCKADE
- ND — NOT DETECTED

SOURCE: GRIFFIN INTERNATIONAL SURVEY DATA, 9/28/99

JOB #: 29941479 VTDEC SITE # 97-2309

GRIFFIN INTERNATIONAL INC

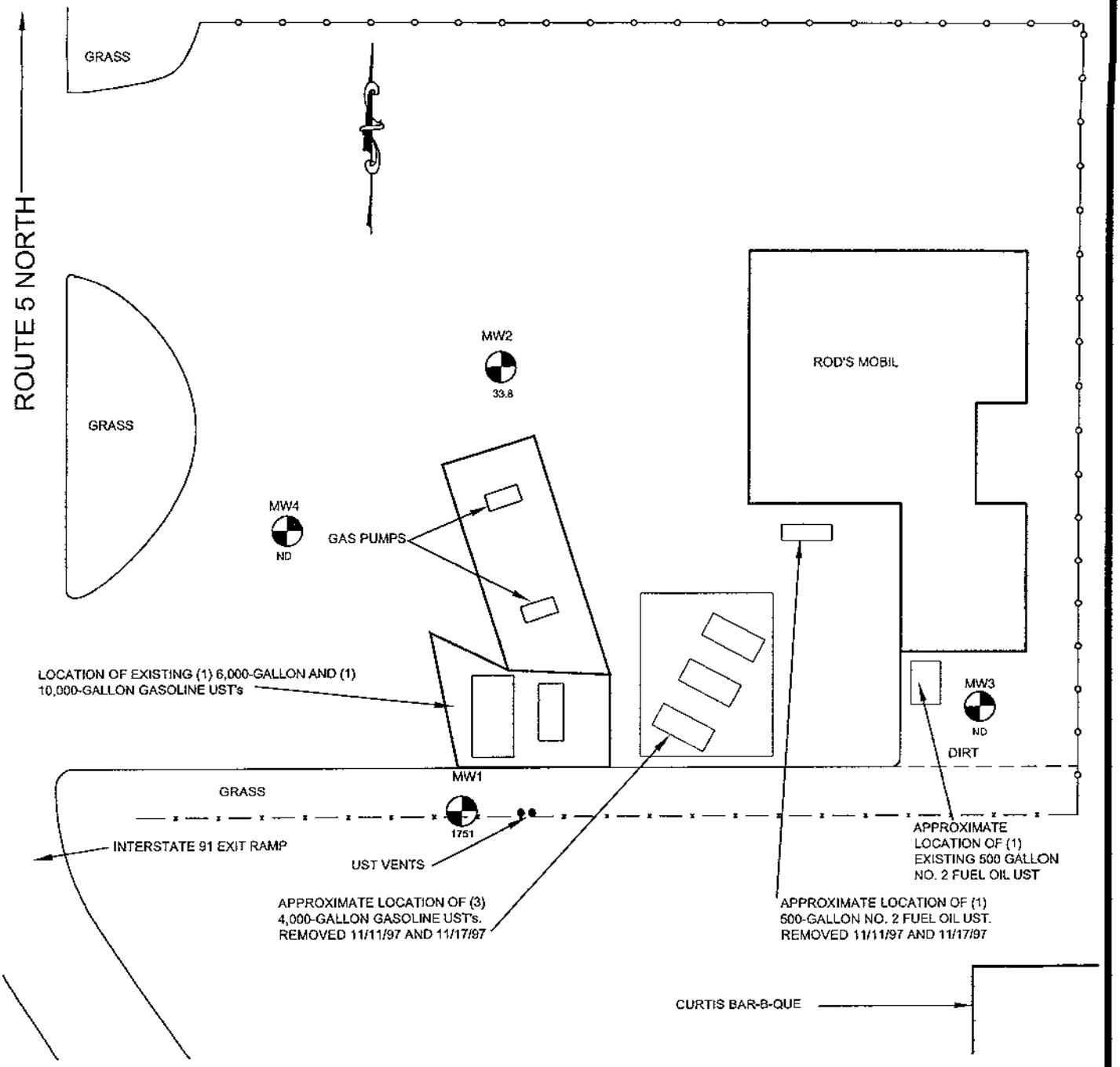
ROD'S MOBIL

46 MAIN STREET, PUTNEY, VERMONT

TOTAL TARGETED VOCs (METHOD 8021B)

MEASURED 10/12/99

DATE: 12/20/99	DWG.#: 3	SCALE:1"=30'	DRN.:NM	APP.: BS



LEGEND

- 1751 MONITORING WELL WITH BTEX CONCENTRATION (ppb)
- — x — FENCE, PICKET
- — o — FENCE, STOCKADE
- ND NOT DETECTED

SOURCE: GRIFFIN INTERNATIONAL SURVEY DATA, 9/28/99

JOB #: 29941479 VTDEC SITE # 97-2309

GRIFFIN INTERNATIONAL INC

ROD'S MOBIL

46 MAIN STREET, PUTNEY, VERMONT

TOTAL BTEX CONCENTRATION

MEASURED 10/12/99

DATE: 12/20/99	DWG.#: 4	SCALE:1"=30'	DRN.:NM	APP.: BS

APPENDIX B

Boring Logs

BORING LOG: **Rod's Mobil** Boring no: **MW1**

Griffin Project #:	29941479	Drilling Method:	Hollow-stem auger
Drilled by :	T&K Drilling	Pilot Boring Dia.:	4.25-inches
Driller:	Steve Legere	Final Boring Dia.:	4.25-inches
Supervised by:	Griffin International	DTW from grade:	15 feet
Logged by:	B. Stopford	DTW Date, Time:	9/28/99, 11:25
Date Started:	09/28/1999	Total Depth:	22 feet
Date Finished:	09/28/1999	PID:	HNu Model HW-101, 10.2 eV
Protection Level:	D+	Soil Drilled:	sand and silt

Time	Sample No.	Depth (ft)	Blows/ 6" (140 lb.)	Pen/ Rec (")	PID	Description and Comments
11:08	1	0-2	auger flights		0	Well graded sand with silt (SW-SM). 90% fine to medium sand, 10% silt. Moist, brown.
11:12	2	5-7	10/16/15/15	24/16	0	Well graded sand (SW). 95% fine to medium sand, 5% silt. Dry to moist, light brown.
11:19	3	10-10.5	6/na/na/na	6/6	0	Well graded sand (SW). 95% fine to medium sand, 5% silt. Moist, light brown.
11:19	3	10.5-12	na/6/8/8	18/18	0	Silt with sand (ML). 15% fine sand and 85% silt, in layers. Moist to wet, light brown and olive gray.
11:25	4	15-17	4/6/8/12	24/22	0	Silt (ML). 10% fine sand and 90% silt, in layers. Wet, olive gray and brown.
11:33	5	20-22	4/6/8/9	24/24	0	Silt (ML). 10% fine sand and 90% silt, in layers. Wet, olive gray.

Prepared by: BS

GRIFFIN INTERNATIONAL

BORING LOG: **Rod's Mobil** Boring no: **MW2**

Griffin Project #:	29941479	Drilling Method:	Hollow-stem auger
Drilled by :	T&K Drilling	Pilot Boring Dia.:	4.25-inches
Driller:	Steve Legere	Final Boring Dia.:	4.25-inches
Supervised by:	Griffin International	DTW from grade:	15 feet
Logged by:	B. Stopford	DTW Date, Time:	9/28/99, 8:36
Date Started:	09/28/1999	Total Depth:	27 feet
Date Finished:	09/28/1999	PID:	HNu Model HW-101, 10.2 eV
Protection Level:	D+	Soil Drilled:	sand and silt

Time	Sample No.	Depth (ft)	Blows/ 6" (140 lb.)	Pen/ Rec (")	PID	Description and Comments
8:14	1	0-2	auger flights		0	Well graded sand with silt (SW-SM). 90% fine to medium sand, 10% silt. Dry, brown.
8:20	2	5-7	11/15/17/16	24/16	0	Well graded sand (SW). 95% fine to medium sand, 5% silt. Dry, light brown.
8:27	3	10-12	6/11/9/9	24/17	0	Well graded sand with silt (SW-SM). 90% fine to medium sand, 10% silt. Moist, brown and light brown.
8:36	4	15-17	3/3/6/9	24/24	0	Silt (ML). 10% fine sand and 90% silt, in layers. Wet, light brown and olive gray.
8:45	5	20-22	3/5/7/8	24/24	0	Silt (ML). 10% fine sand and 90% silt, in layers. Wet, olive gray and light brown.
8:56	6	25-27	5/4/5/0	24/24	0	Silt with sand (ML). 20% fine sand and 80% silt, in layers. Wet, olive gray and light brown. Top 18-inches in spoon contained wet sand and silt that caved into the spoon from upper layers.

Prepared by: BS

GRIFFIN INTERNATIONAL

BORING LOG: **Rod's Mobil** Boring no: **MW3**

Griffin Project #:	29941479	Drilling Method:	Hollow-stem auger
Drilled by :	T&K Drilling	Pilot Boring Dia.:	4.25-inches
Driller:	Steve Legere	Final Boring Dia.:	4.25-inches
Supervised by:	Griffin International	DTW from grade:	15 feet
Logged by:	B. Stopford	DTW Date, Time:	9/28/99, 12:30
Date Started:	09/28/1999	Total Depth:	22 feet
Date Finished:	09/28/1999	PID:	HNu Model HW-101, 10.2 eV
Protection Level:	D+	Soil Drilled:	sand and silt

Time	Sample No.	Depth (ft)	Blows/ 6" (140 lb.)	Pen/ Rec (")	PID	Description and Comments
12:00	1	0-2	auger flights		0	Well graded sand with silt (SW-SM). 90% fine to medium sand, 10% silt. Dry, brown.
12:10	2	5-7	1/1/5/8	24/16	0	Well graded sand (SW). 95% fine to medium sand, 5% silt. Dry, light brown.
12:22	3	10-12	5/11/11/11	24/18	0	Poorly graded sand (SP). 95% fine sand, 5% silt. Dry, light brown.
12:30	4	15-17	3/7/12/11	24/16	0	Sandy silt (ML). 40% fine sand and 60% silt, in layers. Wet, light brown and olive gray.
12:39	5	20-22	2/3/5/5	24/24	0	Sandy silt (ML). 30% fine sand and 70% silt, in layers. Wet, light brown and olive gray.

Prepared by: BS

GRIFFIN INTERNATIONAL

BORING LOG: **Rod's Mobil** Boring no: **MW4**

Griffin Project #:	29941479	Drilling Method:	Hollow-stem auger
Drilled by :	T&K Drilling	Pilot Boring Dia.:	4.25-inches
Driller:	Steve Legere	Final Boring Dia.:	4.25-inches
Supervised by:	Griffin International	DTW from grade:	15 feet
Logged by:	B. Stopford	DTW Date, Time:	9/28/99, 10:10
Date Started:	09/28/1999	Total Depth:	22 feet
Date Finished:	09/28/1999	PID:	HNu Model HW-101, 10.2 eV
Protection Level:	D+	Soil Drilled:	sand and silt

Time	Sample No.	Depth (ft)	Blows/ 6" (140 lb.)	Pen/ Rec (")	PID	Description and Comments
9:52	1	0-2	auger flights		0	Well graded sand with silt (SW-SM). 90% fine to medium sand, 10% silt. Dry, brown.
9:57	2	5-7	15/16/18/18	24/17	0	Well graded sand (SW). 95% fine to medium sand, 5% silt. Dry to moist, light brown and brown.
10:04	3	10-12	6/9/13/14	24/20	0	Silty sand (SM). 85% fine to medium sand, 15% silt. Moist, light brown, with layers of red staining.
10:10	4	15-17	3/6/6/9	24/20	0	Silt with sand (ML). 20% fine sand and 80% silt, in layers. Wet, light brown and olive gray.
10:18	5	20-22	2/5/7/7	24/24	0	Silt (ML). 10% fine sand and 90% silt, in layers. Wet, olive gray.

Prepared by: BS

GRIFFIN INTERNATIONAL

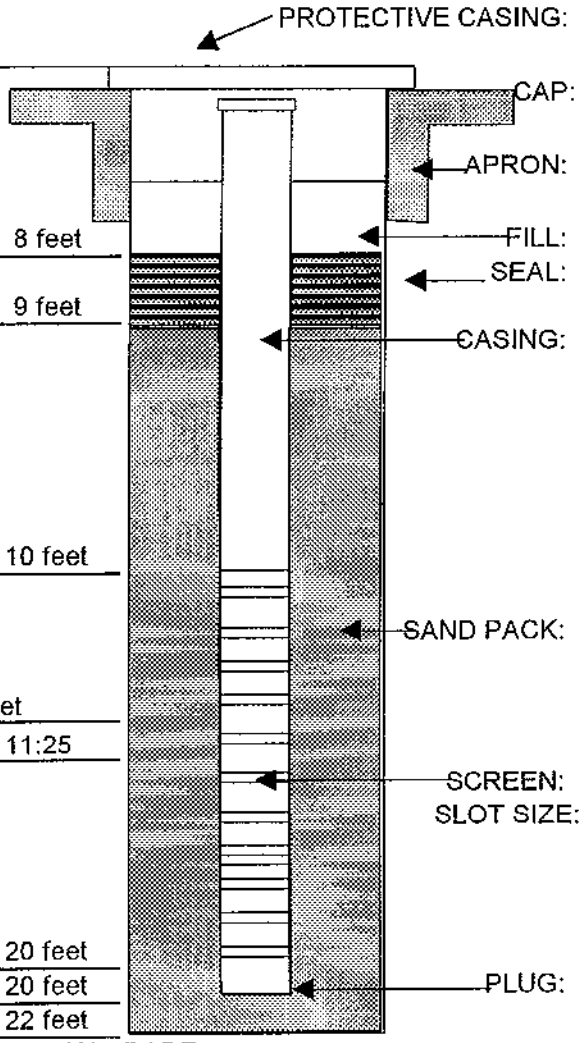
APPENDIX C

Well Construction Diagrams

Well Construction Diagram

PROJECT NAME: Rod's Mobil — Well no: **MW1**

Griffin Project #:	29941479	Date Installed:	09/28/1999
Drilled by :	T&K Drilling	Drilling Method:	Hollow-stem auger
Driller:	Steve Legere	Boring Diameter.:	4.25-inches
Supervised by:	Griffin International	Well Inside Diameter:	2-inches
Logged by:	BS	Development Method:	bailer



Prepared by: BS

Griffin International
PO Box 943
Williston, Vermont
(802) 865 - 4288

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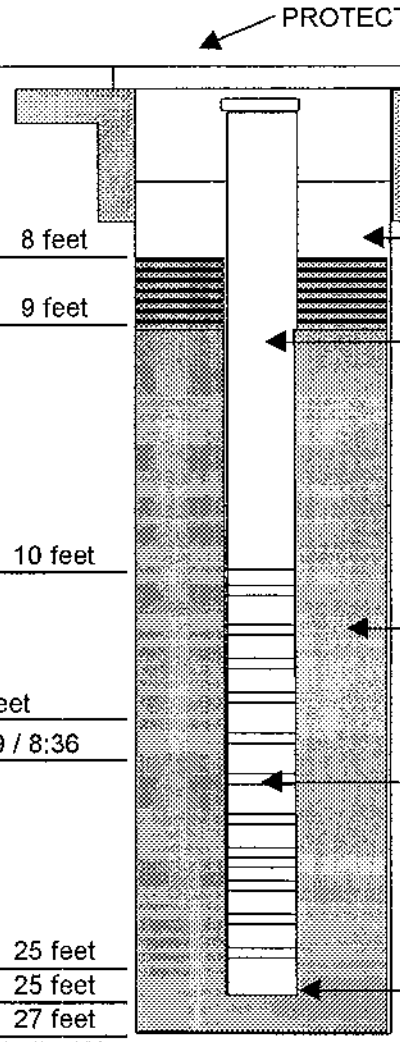
Well Construction Diagram

PROJECT NAME: Rod's Mobil Well no: **MW2**

Griffin Project #:	29941479	Date Installed:	09/28/1999
Drilled by :	T&K Drilling	Drilling Method:	Hollow-stem auger
Driller:	Steve Legere	Boring Diameter.:	4.25-inches
Supervised by:	Griffin International	Well Inside Diameter:	2-inches
Logged by:	BS	Development Method:	bailer



Prepared by: BS

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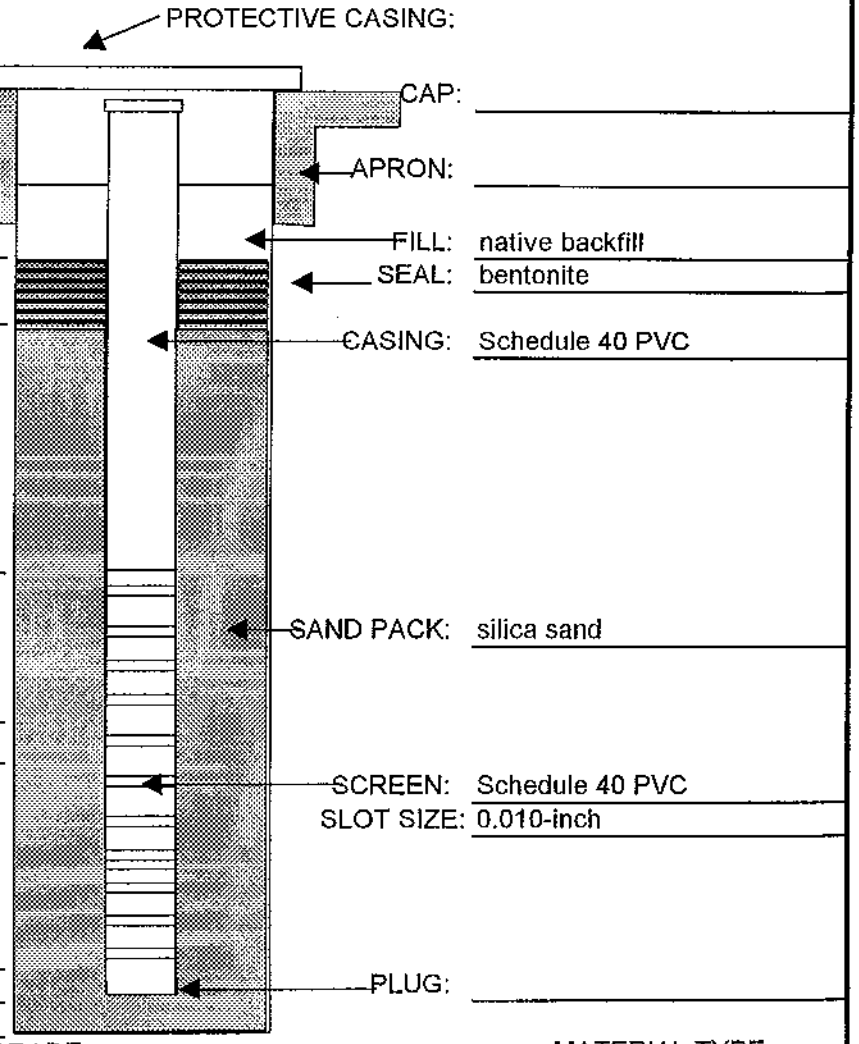
Williston, Vermont
(802) 865 - 4288

GRIFFIN INTERNATIONAL

Well Construction Diagram

PROJECT NAME: Rod's Mobil Well no: **MW3**

Griffin Project #:	29941479	Date Installed:	09/28/1999
Drilled by :	T&K Drilling	Drilling Method:	Hollow-stem auger
Driller:	Steve Legere	Boring Diameter.:	4.25-inches
Supervised by:	Griffin International	Well Inside Diameter:	2-inches
Logged by:	BS	Development Method:	bailer



Prepared by: BS

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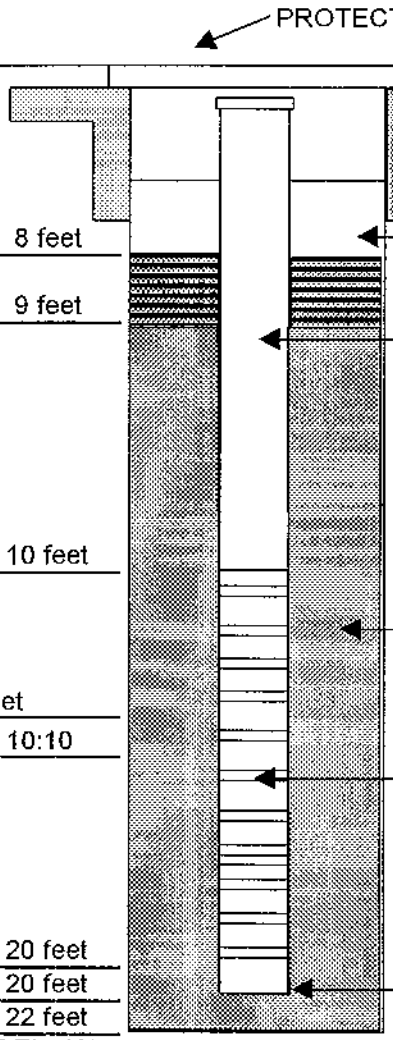
GRIFFIN INTERNATIONAL

Well Construction Diagram

PROJECT NAME: Rod's Mobil Well no: **MW4**

Griffin Project #:	29941479	Date Installed:	09/28/1999
Drilled by :	T&K Drilling	Drilling Method:	Hollow-stem auger
Driller:	Steve Legere	Boring Diameter.:	4.25-inches
Supervised by:	Griffin International	Well Inside Diameter:	2-inches
Logged by:	BS	Development Method:	bailer



Prepared by: BS

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GRIFFIN INTERNATIONAL

APPENDIX D

Liquid Level Monitoring Data

Liquid Level Monitoring Data

Measurement Date: October 12, 1999

Well I.D.	Well Depth btoc	Top of Casing Elevation	Depth To Product btoc	Depth To Water btoc	Product Thickness	Specific Gravity Of Product	Water Equivalent	Corrected Depth To Water	Corrected Water Table Elevation
MW1	19.5	97.95	-	11.96	-	-	-	-	85.99
MW2	23.8	99.21	-	12.09	-	-	-	-	87.12
MW3	19.4	100.00	-	13.44	-	-	-	-	86.56
MW4	19.5	98.00	-	11.16	-	-	-	-	86.84

All Values Reported in Feet
btoc - Below Top of Casing
Elevations determined relative to top of casing of MW3, which was arbitrarily set at 100'
Site surveyed by Griffin International, Inc. on September 28, 1999
nm - not measured

APPENDIX E

Groundwater Quality Summary Data

Groundwater Quality Summary Data

Sample Date: October 12, 1999

PARAMETER	MW1	MW2	MW3	MW4	VGES
Benzene	ND(10)	**33.8**	ND(1)	ND(1)	5
Toluene	173.	ND(5)	ND(1)	ND(1)	1,000
Ethylbenzene	188.	ND(5)	ND(1)	ND(1)	700
Xylenes	1,390.	ND(5)	ND(1)	ND(1)	10,000
Total BTEX	**1,751.**	**33.8**	**ND**	**ND**	-
1,3,5 Trimethyl Benzene	**160.**	ND(5)	ND(1)	ND(1)	4
1,2,4 Trimethyl Benzene	**522.**	ND(5)	ND(1)	ND(1)	5
Napthalene	**60.1**	ND(5)	ND(1)	ND(1)	20
MTBE	ND(100)	**198.**	16.6	ND(10)	40
Total Targeted VOCs	**2,493.**	**232.**	**16.6**	**ND**	-
TPH (mg/L)	**4.6**	ND(0.40)	ND(0.40)	ND(0.40)	-

TBQ( ): Trace below quantitation limit (quantitation limit)
ND( ): Not detected (detection limit)
All values in ug/L (ppb) unless noted
Analysis by EPA Method 8021B, except for TPH by EPA Method 8015 DRO
VGES = Vermont Groundwater Enforcement Standards (Vermont Groundwater Protection Rule and Strategy, 11/15/97)

Quality Assurance and Control Samples

Sample Date: October 12, 1999

PARAMETER	Trip Blank	Duplicate (MW-1)	VGES
Benzene	ND(1)	ND(10)	5
Toluene	ND(1)	166.	1,000
Ethylbenzene	ND(1)	176.	700
Xylenes	ND(1)	1,300.	10,000
Total BTEX	**ND**	**1,642.**	
1,3,5 Trimethyl Benzene	ND(1)	**147.**	4
1,2,4 Trimethyl Benzene	ND(1)	**482.**	5
Napthalene	ND(1)	**39.0**	20
MTBE	ND(10)	ND(100)	40
Total Targeted VOCs	**ND**	**2,310.**	
TPH (mg/L)	NT	NT	-

Analysis by EPA Method 8021B, except for TPH by EPA Method 8015 DRO
All values in ug/L (ppb) unless noted
NT = not tested
ND( ) = None detected (detection limit)
TBQ( ) = Trace below quantitation (detection limit)
VGES = Vermont Groundwater Enforcement Standards (Vermont Groundwater Protection Rule and Strategy, 11/15/97)

APPENDIX F

Laboratory Analysis Reports

ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

REPORT OF LABORATORY ANALYSIS

CLIENT: Griffin International
PROJECT NAME: Rods Mobil/#29941479
REPORT DATE: October 21, 1999
DATE SAMPLED: October 12, 1999

ORDER ID: 4458
REF.#: 145,756 - 145,761

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Chain of custody indicated sample preservation with HCl.

All samples were prepared and analyzed by requirements outlined in the referenced method and within the specified holding times. All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced method. Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Individual sample performance was monitored by the addition of surrogate analytes to each sample. All surrogate recovery data was determined to be within laboratory QA/QC guidelines unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

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ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

EPA METHOD 8021B--PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: Rods Mobil/#29941479
CLIENT PROJ. #: 29941479

DATE RECEIVED: October 13, 1999
REPORT DATE: October 21, 1999
ORDER ID: 4458

Ref. #:	145,756	145,757	145,758	145,759	145,760
Site:	Trip Blank	MW-4	MW-1	Duplicate	MW-3
Date Sampled:	10/12/99	10/12/99	10/12/99	10/12/99	10/12/99
Time Sampled:	7:30	2:33	2:43	2:43	2:52
Sampler:	J.R.	J.R.	J.R.	J.R.	J.R.
Date Analyzed:	10/20/99	10/20/99	10/20/99	10/20/99	10/20/99
UIP Count:	0	0	>10	>10	0
Dil. Factor (%):	100	100	10	10	100
Surr % Rec. (%):	93	95	90	97	96
Parameter	Conc. (ug/L)	Conc. (ug/L)	Conc. (ug/L)	Conc. (ug/L)	Conc. (ug/L)
MTBE	<10	<10	<100	<100	16.6
Benzene	<1	<1	<10	<10	<1
Toluene	<1	<1	173.	166.	<1
Ethylbenzene	<1	<1	188.	176.	<1
Xylenes	<1	<1	1,390.	1,300.	<1
1,3,5 Trimethyl Benzene	<1	<1	160.	147.	<1
1,2,4 Trimethyl Benzene	<1	<1	522.	482.	<1
Naphthalene	<1	<1	60.1	39.0	<1

Ref. #:	145,761
Site:	MW-2
Date Sampled:	10/12/99
Time Sampled:	3:21
Sampler:	J.R.
Date Analyzed:	10/21/99
UIP Count:	0
Dil. Factor (%):	20
Surr % Rec. (%):	95
Parameter	Conc. (ug/L)
MTBE	198.
Benzene	33.8
Toluene	<5
Ethylbenzene	<5
Xylenes	<5
1,3,5 Trimethyl Benzene	<5
1,2,4 Trimethyl Benzene	<5
Naphthalene	<5

Note: UIP = Unidentified Peaks TBQ = Trace Below Quantitation NI = Not Indicated

ENDYNE, INC.

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333

JOB# 29941479

32612

CHAIN-OF-CUSTODY RECORD

Project Name: ROD'S MOBIL Site Location: PUTNEY VT.	Reporting Address: GRIFFIN	Billing Address: GRIFFIN
Endyne Project Number: 6145	Company: GRIFFIN Contact Name/Phone #: BS	Sampler Name: J. ROCKLIN Phone #:

Lab #	Sample Location	Matrix	GRAB	COMP	Date/Time 10/12/99	Sample Containers No.	Sample Containers Type/Size	Field Results/Remarks	Analysis Required	Sample Preservation	Rush
145 7.6	TRIP BLANK	H_2O	✓		0730	2	40ml		8021B	HCl	
7.7	MW-4				1433				8021B/8015DRO		
7.8	MW-1				1443				↓		
7.9	DUPLICATE MW-1				1443				8021B		
7.10	MW-3				1452				8021B/8015 DRO		
7.11	MW-2				1521				↓		
7.12	RODS SUPPLY WELL				1515				524.2		
7.13	PUTNEY CO-OP SUPPLY WELL	↓	↓		1541	↓	↓		524.2	↓	

Relinquished by: Signature R. Hackel	Received by: Signature Stacy Benjamin	Date/Time 10/13/99 10:20AM
Relinquished by: Signature Stacy Benjamin	Received by: Signature Green Transit	Date/Time 10/13/99 11:41

New York State Project: Yes ___ No ✓

Requested Analyses

1	pH	6	TKN	11	Total Solids	16	Metals (Specify)	21	EPA 624	26	EPA 8270 B/N or Acid
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	EPA 625 B/N or A	27	EPA 8010/8020
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8080 Pest/PCB
4	Nitrite N	9	BOD_5	14	Turbidity	19	BTEX	24	EPA 608 Pest/PCB		
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240		
29	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
30	Other (Specify):										

ENDYNE, INC.

Laboratory Services

32 James Brown Drive
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FAX 879-7103

LABORATORY REPORT

CLIENT: Griffin International
PROJECT: Rods Mobil/#29941479
REPORT DATE: October 21, 1999

ORDER ID: 4458
DATE RECEIVED: October 13, 1999

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Different groups of analyses may be reported under separate cover.

All samples were prepared and analyzed by requirements outlined in the referenced methods and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced methods.

Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits, unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

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ENDYNE, INC.

Laboratory Services

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LABORATORY REPORT

CLIENT: Griffin International
PROJECT: Rods Mobil/#29941479
REPORT DATE: October 21, 1999

ORDER ID: 4458
DATE RECEIVED: October 13, 1999
SAMPLER: JR
ANALYST: 128

Ref. Number: 145757 | Site: MW-4 | Date Sampled: October 12, 1999 | Time: 2:33 PM

Parameter	Result	Unit	Method	Analysis Date
TPH 8015 DRO	< 0.40	mg/L	SW 8015B	10/16/99

Ref. Number: 145758 | Site: MW-1 | Date Sampled: October 12, 1999 | Time: 2:43 PM

Parameter	Result	Unit	Method	Analysis Date
TPH 8015 DRO	4.6	mg/L	SW 8015B	10/16/99

Ref. Number: 145760 | Site: MW-3 | Date Sampled: October 12, 1999 | Time: 2:52 PM

Parameter	Result	Unit	Method	Analysis Date
TPH 8015 DRO	< 0.40	mg/L	SW 8015B	10/16/99

Ref. Number: 145761 | Site: MW-2 | Date Sampled: October 12, 1999 | Time: 3:21 PM

Parameter	Result	Unit	Method	Analysis Date
TPH 8015 DRO	< 0.40	mg/L	SW 8015B	10/16/99

ENDYNE, INC.

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JOB# 29941479

30 rg

CHAIN-OF-CUSTODY RECORD

32612

Project Name: ROD'S MOBIL Site Location: PUTNEY VT.	Reporting Address: GRIFFIN	Billing Address: GRIFFIN
Endyne Project Number: 4458	Company: GRIFFIN Contact Name/Phone #: BS	Sampler Name: J. ROCKLIN Phone #:

Lab #	Sample Location	Matrix	GRAB	COMP	Date/Time 10/12/99	Sample Containers No.	Sample Containers Type/Size	Field Results/Remarks	Analysis Required	Sample Preservation	Rush
145-756	TRIP BLANK	H_2O	✓		0730	2	40ml		8021B	HCl	
757	MW-4				1433				8021B/8015DRO		
758	MW-1				1443				↓		
759	DUPLICATE MW-1				1443				8021B		
760	MW-3				1452				8021B/8015DRO		
761	MW-2				1521				↓		
762	RODS SUPPLY WELL				1515				524.2		
763	PUTNEY CO-OP SUPPLY WELL	↓	↓		1541	↓	↓		524.2	↓	

Relinquished by: Signature	Received by: Signature	Date/Time 10/13/99 10:20AM
Relinquished by: Signature	Received by: Signature	Date/Time 10/13/99 10:40

New York State Project: Yes ___ No ✓

Requested Analyses

1	pH	6	TKN	11	Total Solids	16	Metals (Specify)	21	EPA 624	26	EPA 8270 B/N or Acid
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	EPA 625 B/N or A	27	EPA 8010/8020
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8080 Pest/PCB
4	Nitrite N	9	BOD_5	14	Turbidity	19	BTEX	24	EPA 608 Pest/PCB		
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240		
29	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
30	Other (Specify):										

ENDYNE, INC.

Laboratory Services

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LABORATORY REPORT

CLIENT: Griffin International
PROJECT: Rods Mobil/#29941479
REPORT DATE: October 29, 1999

ORDER ID: 4458
DATE RECEIVED: October 13, 1999

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Different groups of analyses may be reported under separate cover.

All samples were prepared and analyzed by requirements outlined in the referenced methods and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced methods.

Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits, unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

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ENDYNE, INC.

Laboratory Services

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Williston, Vermont 05495
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LABORATORY REPORT

EPA 524.2

CLIENT: Griffin International
PROJECT: Rods Mobil/#29941479
SITE: Rod's Supply Well
DATE RECEIVED: October 13, 1999
REPORT DATE: October 29, 1999
ANALYSIS DATE: October 26, 1999

ORDER ID: 4458
REFERENCE NUMBER: 145762
DATE SAMPLED: October 12, 1999
TIME SAMPLED: 3:15 PM
SAMPLER: JR
ANALYST: 725

Parameter	Result ug/L
Benzene	< 0.5
Bromobenzene	< 0.5
Bromochloromethane	< 0.5
Bromomethane	< 0.5
n-Butylbenzene	< 0.5
sec-Butylbenzene	< 0.5
tert-Butylbenzene	< 0.5
Carbon tetrachloride	< 0.5
Chlorobenzene	< 0.5
Chloroethane	< 0.5
Chloromethane	< 0.5
2-Chlorotoluene	< 1.0
4-Chlorotoluene	< 1.0
Dibromomethane	< 1.0
1,2-Dichlorobenzene	< 0.5
1,3-Dichlorobenzene	< 0.5
1,4-Dichlorobenzene	< 0.5
Dichlorodifluoromethane	< 0.5
1,1-Dichloroethane	< 0.5
1,2-Dichloroethane	< 0.5
1,1-Dichloroethene	< 0.5
cis-1,2-Dichloroethene	< 0.5
trans-1,2-Dichloroethene	< 0.5
Dichloromethane	< 1.0
1,2-Dichloropropane	< 0.5
1,3-Dichloropropane	< 0.5
2,2-Dichloropropane	< 0.5
1,1-Dichloropropene	< 0.5
cis-1,3-Dichloropropene	< 0.5
trans-1,3-Dichloropropene	< 0.5
Ethylbenzene	< 0.5

Parameter	Result ug/L
Hexachlorobutadiene	< 0.5
Isopropylbenzene	< 0.5
4-Isopropyltoluene	< 0.5
MTBE	< 1.0
Naphthalene	< 1.0
n-Propylbenzene	< 0.5
Styrene	< 0.5
1,1,1,2-Tetrachloroethane	< 0.5
1,1,2,2-Tetrachloroethane	< 1.0
Tetrachloroethene	< 0.5
Toluene	< 0.5
1,2,3-Trichlorobenzene	< 0.5
1,2,4-Trichlorobenzene	< 0.5
1,1,1-Trichloroethane	< 0.5
1,1,2-Trichloroethane	< 0.5
Trichloroethene	< 0.5
Trichlorofluoromethane	< 1.0
1,2,3-Trichloropropane	< 0.5
1,2,4-Trimethylbenzene	< 0.5
1,3,5-Trimethylbenzene	< 0.5
Vinyl Chloride	< 0.5
Xylenes, Total	< 1.0
Bromodichloromethane	< 0.5
Bromoform	< 0.5
Chloroform	< 0.5
Dibromochloromethane	< 0.5
Total Trihalomethanes	< 0.5
Surrogate 1	108.%
Surrogate 2	104.%
UIP's	0.

ENDYNE, INC.

Laboratory Services

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LABORATORY REPORT

EPA 524.2

CLIENT: Griffin International
PROJECT: Rods Mobil/#29941479
SITE: Putney Co-Op Supply Well
DATE RECEIVED: October 13, 1999
REPORT DATE: October 29, 1999
ANALYSIS DATE: October 26, 1999

ORDER ID: 4458
REFERENCE NUMBER: 145763
DATE SAMPLED: October 12, 1999
TIME SAMPLED: 3:41 PM
SAMPLER: JR
ANALYST: 725

Parameter	Result ug/L
Benzene	< 0.5
Bromobenzene	< 0.5
Bromochloromethane	< 0.5
Bromomethane	< 0.5
n-Butylbenzene	< 0.5
sec-Butylbenzene	< 0.5
tert-Butylbenzene	< 0.5
Carbon tetrachloride	< 0.5
Chlorobenzene	< 0.5
Chloroethane	< 0.5
Chloromethane	< 0.5
2-Chlorotoluene	< 1.0
4-Chlorotoluene	< 1.0
Dibromomethane	< 1.0
1,2-Dichlorobenzene	< 0.5
1,3-Dichlorobenzene	< 0.5
1,4-Dichlorobenzene	< 0.5
Dichlorodifluoromethane	< 0.5
1,1-Dichloroethane	< 0.5
1,2-Dichloroethane	< 0.5
1,1-Dichloroethene	< 0.5
cis-1,2-Dichloroethene	< 0.5
trans-1,2-Dichloroethene	< 0.5
Dichloromethane	< 1.0
1,2-Dichloropropane	< 0.5
1,3-Dichloropropane	< 0.5
2,2-Dichloropropane	< 0.5
1,1-Dichloropropene	< 0.5
cis-1,3-Dichloropropene	< 0.5
trans-1,3-Dichloropropene	< 0.5
Ethylbenzene	< 0.5

Parameter	Result ug/L
Hexachlorobutadiene	< 0.5
Isopropylbenzene	< 0.5
4-Isopropyltoluene	< 0.5
MTBE	< 1.0
Naphthalene	< 1.0
n-Propylbenzene	< 0.5
Styrene	< 0.5
1,1,1,2-Tetrachloroethane	< 0.5
1,1,2,2-Tetrachloroethane	< 1.0
Tetrachloroethene	< 0.5
Toluene	< 0.5
1,2,3-Trichlorobenzene	< 0.5
1,2,4-Trichlorobenzene	< 0.5
1,1,1-Trichloroethane	< 0.5
1,1,2-Trichloroethane	< 0.5
Trichloroethene	< 0.5
Trichlorofluoromethane	< 1.0
1,2,3-Trichloropropane	< 0.5
1,2,4-Trimethylbenzene	< 0.5
1,3,5-Trimethylbenzene	< 0.5
Vinyl Chloride	< 0.5
Xylenes, Total	< 1.0
Bromodichloromethane	< 0.5
Bromoform	< 0.5
Chloroform	< 0.5
Dibromochloromethane	< 0.5
Total Trihalomethanes	< 0.5
Surrogate 1	110.%
Surrogate 2	108.%
UIP's	0.

ENDYNE, INC.

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333

JOB# 29941479

30 rg

CHAIN-OF-CUSTODY RECORD

32612

Project Name: ROD'S MOBIL Site Location: PUTNEY VT.	Reporting Address: GRIFFIN	Billing Address: GRIFFIN
Endyne Project Number: 4458	Company: GRIFFIN Contact Name/Phone #: BS	Sampler Name: J. ROCKLIN Phone #:

Lab #	Sample Location	Matrix	GRAB	COMP	Date/Time 10/12/99	Sample Containers No.	Sample Containers Type/Size	Field Results/Remarks	Analysis Required	Sample Preservation	Rush
145756	TRIP BLANK	H_2O	✓		0730	2	40ml		8021B	HCl	
757	MW-4	↓	↓		1433	↓	↓		8021B/8015DRO	↓	
758	MW-1				1443				↓		
759	DUPLICATE MW-1				1443				8021B		
760	MW-3				1452				8021B/8015DRO		
761	MW-2				1521				↓		
762	ROD'S SUPPLY WELL				1515				524.2		
763	PUTNEY CO-OP SUPPLY WELL	↓	↓		1541	↓	↓		524.2	↓	

Relinquished by: Signature [signature]	Received by: Signature Stacy Benjamin	Date/Time 10/13/99 10:20AM
Relinquished by: Signature Stacy Benjamin	Received by: Signature Alison [signature]	Date/Time 10/13/99 10:40

New York State Project: Yes ___ No ✓

Requested Analyses

1	pH	6	TKN	11	Total Solids	16	Metals (Specify)	21	EPA 624	26	EPA 8270 B/N or Acid
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	EPA 625 B/N or A	27	EPA 8010/8020
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8080 Pest/PCB
4	Nitrite N	9	BOD_5	14	Turbidity	19	BTEX	24	EPA 608 Pest/PCB		
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240		
29	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
30	Other (Specify):										

GRIFFIN INTERNATIONAL INC

January 11, 2000

Putney Cooperative
Attention: Mark
P.O. Box 730
Putney, VT 05346

RE: Laboratory Analysis of Sample Collected from the Putney Cooperative's supply well as part of a Subsurface Investigation at Rod's Mobil
(VTDEC Site # 97-2309)

Dear Mark:

Enclosed please find a copy of the laboratory results regarding the analysis of a water sample collected from the Putney Coop supply well on October 12, 1999. This sample was collected as part of an investigation of potential subsurface petroleum contamination at Rod's Mobil, located to the east of the Putney Coop supply well. The sample was analyzed for the presence of volatile organic compounds via EPA Method 524.2. None of the compounds targeted by the analysis method were detected in the sample collected.

Please do not hesitate to call, if you have any questions or comments.

Sincerely,

Beth Stopford

Beth Stopford
Environmental Engineer

Enc.

cc: Mr. Rodney Winchester, Rod's Mobil
Mr. Chuck Schwer, VTDEC
GI #29941479

P.O. Box 943 • Williston, VT 05495 • Phone 802-865-4288 • Fax 802-657-4129
59 Clinton Street • Plattsburgh, NY 12901 • Phone 518-562-4666 • Fax 518-561-6832

ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

CLIENT: Griffin International
PROJECT: Rods Mobil/#29941479
REPORT DATE: October 29, 1999

ORDER ID: 4458
DATE RECEIVED: October 13, 1999

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Different groups of analyses may be reported under separate cover.

All samples were prepared and analyzed by requirements outlined in the referenced methods and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced methods.

Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits, unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

enclosures

32612

ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

EPA 524.2

CLIENT: Griffin International
PROJECT: Rods Mobil/#29941479
SITE: Rod's Supply Well
DATE RECEIVED: October 13, 1999
REPORT DATE: October 29, 1999
ANALYSIS DATE: October 26, 1999

ORDER ID: 4458
REFERENCE NUMBER: 145762
DATE SAMPLED: October 12, 1999
TIME SAMPLED: 3:15 PM
SAMPLER: JR
ANALYST: 725

Parameter	Result ug/L
Benzene	< 0.5
Bromobenzene	< 0.5
Bromochloromethane	< 0.5
Bromomethane	< 0.5
n-Butylbenzene	< 0.5
sec-Butylbenzene	< 0.5
tert-Butylbenzene	< 0.5
Carbon tetrachloride	< 0.5
Chlorobenzene	< 0.5
Chloroethane	< 0.5
Chloromethane	< 0.5
2-Chlorotoluene	< 1.0
4-Chlorotoluene	< 1.0
Dibromomethane	< 1.0
1,2-Dichlorobenzene	< 0.5
1,3-Dichlorobenzene	< 0.5
1,4-Dichlorobenzene	< 0.5
Dichlorodifluoromethane	< 0.5
1,1-Dichloroethane	< 0.5
1,2-Dichloroethane	< 0.5
1,1-Dichloroethene	< 0.5
cis-1,2-Dichloroethene	< 0.5
trans-1,2-Dichloroethene	< 0.5
Dichloromethane	< 1.0
1,2-Dichloropropane	< 0.5
1,3-Dichloropropane	< 0.5
2,2-Dichloropropane	< 0.5
1,1-Dichloropropene	< 0.5
cis-1,3-Dichloropropene	< 0.5
trans-1,3-Dichloropropene	< 0.5
Ethylbenzene	< 0.5

Parameter	Result ug/L
Hexachlorobutadiene	< 0.5
Isopropylbenzene	< 0.5
4-Isopropyltoluene	< 0.5
MTBE	< 1.0
Naphthalene	< 1.0
n-Propylbenzene	< 0.5
Styrene	< 0.5
1,1,1,2-Tetrachloroethane	< 0.5
1,1,2,2-Tetrachloroethane	< 1.0
Tetrachloroethene	< 0.5
Toluene	< 0.5
1,2,3-Trichlorobenzene	< 0.5
1,2,4-Trichlorobenzene	< 0.5
1,1,1-Trichloroethane	< 0.5
1,1,2-Trichloroethane	< 0.5
Trichloroethene	< 0.5
Trichlorofluoromethane	< 1.0
1,2,3-Trichloropropane	< 0.5
1,2,4-Trimethylbenzene	< 0.5
1,3,5-Trimethylbenzene	< 0.5
Vinyl Chloride	< 0.5
Xylenes, Total	< 1.0
Bromodichloromethane	< 0.5
Bromoform	< 0.5
Chloroform	< 0.5
Dibromochloromethane	< 0.5
Total Trihalomethanes	< 0.5
Surrogate 1	108.%
Surrogate 2	104.%
UIP's	0.

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32 James Brown Drive

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Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

EPA 524.2

CLIENT: Griffin International
PROJECT: Rods Mobil/#29941479
SITE: Putney Co-Op Supply Well
DATE RECEIVED: October 13, 1999
REPORT DATE: October 29, 1999
ANALYSIS DATE: October 26, 1999

ORDER ID: 4458
REFERENCE NUMBER: 145763
DATE SAMPLED: October 12, 1999
TIME SAMPLED: 3:41 PM
SAMPLER: JR
ANALYST: 725

Parameter	Result ug/L
Benzene	< 0.5
Bromobenzene	< 0.5
Bromochloromethane	< 0.5
Bromomethane	< 0.5
n-Butylbenzene	< 0.5
sec-Butylbenzene	< 0.5
tert-Butylbenzene	< 0.5
Carbon tetrachloride	< 0.5
Chlorobenzene	< 0.5
Chloroethane	< 0.5
Chloromethane	< 0.5
2-Chlorotoluene	< 1.0
4-Chlorotoluene	< 1.0
Dibromomethane	< 1.0
1,2-Dichlorobenzene	< 0.5
1,3-Dichlorobenzene	< 0.5
1,4-Dichlorobenzene	< 0.5
Dichlorodifluoromethane	< 0.5
1,1-Dichloroethane	< 0.5
1,2-Dichloroethane	< 0.5
1,1-Dichloroethene	< 0.5
cis-1,2-Dichloroethene	< 0.5
trans-1,2-Dichloroethene	< 0.5
Dichloromethane	< 1.0
1,2-Dichloropropane	< 0.5
1,3-Dichloropropane	< 0.5
2,2-Dichloropropane	< 0.5
1,1-Dichloropropene	< 0.5
cis-1,3-Dichloropropene	< 0.5
trans-1,3-Dichloropropene	< 0.5
Ethylbenzene	< 0.5

Parameter	Result ug/L
Hexachlorobutadiene	< 0.5
Isopropylbenzene	< 0.5
4-Isopropyltoluene	< 0.5
MTBE	< 1.0
Naphthalene	< 1.0
n-Propylbenzene	< 0.5
Styrene	< 0.5
1,1,1,2-Tetrachloroethane	< 0.5
1,1,2,2-Tetrachloroethane	< 1.0
Tetrachloroethene	< 0.5
Toluene	< 0.5
1,2,3-Trichlorobenzene	< 0.5
1,2,4-Trichlorobenzene	< 0.5
1,1,1-Trichloroethane	< 0.5
1,1,2-Trichloroethane	< 0.5
Trichloroethene	< 0.5
Trichlorofluoromethane	< 1.0
1,2,3-Trichloropropane	< 0.5
1,2,4-Trimethylbenzene	< 0.5
1,3,5-Trimethylbenzene	< 0.5
Vinyl Chloride	< 0.5
Xylenes, Total	< 1.0
Bromodichloromethane	< 0.5
Bromoform	< 0.5
Chloroform	< 0.5
Dibromochloromethane	< 0.5
Total Trihalomethanes	< 0.5
Surrogate 1	110.%
Surrogate 2	108.%
UIP's	0.

ENDYNE, INC.

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Williston, Vermont 05495
(802) 879-4333

JOB# 29941479

30 Rg

CHAIN-OF-CUSTODY RECORD

32612

Project Name: ROD'S MOBIL Site Location: PUTNEY VT.	Reporting Address: GRIFFIN	Billing Address: GRIFFIN
Endyne Project Number: 4458	Company: GRIFFIN Contact Name/Phone #: BS	Sampler Name: J. ROCKLIN Phone #:

Lab #	Sample Location	Matrix	GRAB	COMP	Date/Time 10/12/99	Sample Containers No.	Sample Containers Type/Size	Field Results/Remarks	Analysis Required	Sample Preservation	Rush
145756	TRIP BLANK	H_2O	✓		0730	2	40ml		8021B	HCl	
757	MW-4				1433				8021B/8015DRO		
758	MW-1				1443				↓		
759	DUPLICATE MW-1				1443				8021B		
760	MW-3				1452				8021B/8015DRO		
761	MW-2				1521				↓		
762	ROD'S SUPPLY WELL				1515				524.2		
763	PUTNEY CO-OP SUPPLY WELL	↓	↓		1541	↓	↓		524.2	↓	

Relinquished by: Signature Ron Padula	Received by: Signature Stacy Benjamin	Date/Time 10/13/99 10:20AM
Relinquished by: Signature Stacy Benjamin	Received by: Signature Alison Honucci	Date/Time 10/13/99 10:40

New York State Project: Yes ___ No ✓

Requested Analyses

1	pH	6	TKN	11	Total Solids	16	Metals (Specify)	21	EPA 624	26	EPA 8270 B/N or Acid
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	EPA 625 B/N or A	27	EPA 8010/8020
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8080 Pest/PCB
4	Nitrite N	9	BOD_5	14	Turbidity	19	BTEX	24	EPA 608 Pest/PCB		
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240		
29	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
30	Other (Specify):										